

## PATENT COOPERATION TREATY

## PCT


## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 15 JUL 2005

WIPO PCT

Applicant's or agent's file reference PU0345-PCT	<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/EP2004/005524	International filing date (day/month/year) 21.05.2004	Priority date (day/month/year) 23.05.2003	
International Patent Classification (IPC) or national classification and IPC B01D15/08, G01N30/60			
Applicant AMERSHAM BIOSCIENCES AB et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand  17.12.2004		Date of completion of this report  14.07.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Fourgeaud, D  Telephone No. +49 89 2399-	



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/005524

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

**Description, Pages**

1-6 as originally filed

**Claims, Numbers**

1-9 as originally filed

**Drawings, Sheets**

1/7-7/7 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	claims 1-9
Inventive step (IS)	Yes: Claims	
	No: Claims	claims 1-9
Industrial applicability (IA)	Yes: Claims	claims 1-9
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

**Re Item V.**

- 1 The following documents are referred to in this communication:

D1 : EP 0 815 911 A (UNIV SOUTHERN MISSISSIPPI ; TENNESSEE VALLEY  
AUTHORITY (US)) 7 January 1998 (1998-01-07)

D2 : FR 2 573 532 A (GROUPE INDL REALISA APPLIC) 23 May 1986 (1986-05-  
23)

D3 : US 4 891 133 A (COLVIN JR ARTHUR E) 2 January 1990 (1990-01-02)

2 INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parenthesis applying to this document) an improved process for a chromatographic separation. The columns which can be used for making said process are described (see page 7, line 46-page 8, line 11, and figure 6); said columns comprise a first end plate, and a movable portion with a flexible conduit 604 on figure 6. Since said flexible conduit is preferably made of silicon or Teflon tubing, it is evident that it can slide through the opening.

Document D2 discloses some improvements for chromatographic columns, whereby a piston can slide within the column (see figures) for compacting the adsorbent or packing element. Said piston, which forms the said movable adapter mentioned in the present application, is connected to an end plate via a flexible conduit 7 (see figures 3,4) or 7' (see figure 6), said conduit being itself connected to another conduit 13 outside the column. This conduit seems also to slide through the opening, so that the skilled person can make said compacting operation of the packing element.

In Document D3, an embodiment which falls within the scope a present claim 1 is disclosed: it does not seem to be the intention of the applicant with regards to the embodiments disclosed in the figures, to claim a chromatography column where a movable adapter can be moved thanks to a threaded member, such as the one disclosed in D3, said adapter further being provided with a flexible conduit, which can slide through an opening in an end plate, for bringing liquid. However, this

embodiment falls within the scope of present claim 1, since D3 discloses a column having two end plates and a movable adapter, said movable adapter being connected to a duct which can slide through an opening of an end plate, said duct being flexible.

**2.2. DEPENDENT CLAIMS 2-9**

Dependent claims 2-9 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).